20 signal preparation unit

A
phys.
input
signal

anti-
aliasing
filter **22**

A/D
converter **24**

detection
stage **26**

1 classification unit

7

adjusting/
standardizing
stage

28

input
layer

PNN
structure **8**

5
PNN

4

computing
unit

output
layer **9**

wavelet
store

6

3 transformation unit

Fig. 1

FIG. 6

Classification Error Rate for Various Sample Offsets, Using Dual Offset Pattern Nodes per Class